

### ABSTRACT OF THE INVENTION

The invention provides a method for stimulating nerve growth, which also includes nerve regeneration, by contacting nerve cells with human Neural Plakophilin Related *Armadillo* Protein (hNPRAP). In a specific embodiment, hNPRAP causes the development of numerous long, cellular extensions, which are similar to axonal sprouting observed during neuronal regeneration and synapse formation. The invention further relates to pharmaceutical compositions comprising an hNPRAP, or alternatively a gene therapy vector that expresses an hNPRAP. Also provided are methods for identifying substances that modulate expression of hNPRAP.